

Applicants : Josette Masle et al.
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Amendments to the Claims:

Please replace all prior versions and listings of claims as follows:

1. - 36. (Canceled)

37. (New) A method of obtaining plants having enhanced transpiration efficiency which comprise, introducing into a culture of plant cells a nucleic acid encoding an ERECTA protein having an amino acid sequence selected from the group consisting of SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 20 and SEQ ID NO: 45 under conditions such that the nucleic acid is expressed in the plant cells, generating plants from the culture of plant cells, and selecting for plants having enhanced transpiration efficiency compared to plants generated from the plant cells present in the same culture into which the nucleic acid was not introduced.

38. (New) The method of claim 37, wherein the method further comprises propagating the plant having the enhanced transpirational efficiency.

39. (New) The method of claim 37, wherein the plant cells of the culture are selected from the group consisting of rice, sorghum, wheat and maize.

40. (New) The method of claim 37, wherein the nucleic acid is introduced into the culture of plant cells by introducing a construct comprising a gene which expresses the ERECTA protein.

41. (New) The method of claim 37, wherein the plant cells do

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not comprise a nucleic acid encoding SEQ ID NO: 2 prior to the introduction of the nucleic acid.

42. (New) A method of obtaining a plant having enhanced transpiration efficiency comprising introducing into the plant a nucleic acid encoding an ERECTA protein having an amino acid sequence selected from the group consisting of SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 20 and SEQ ID NO: 45 under conditions such that the nucleic acid is expressed in the plant, and selecting for plants having enhanced transpiration efficiency compared to the plant prior to introducing the nucleic acid into the plant.
43. (New) The method of claim 42, wherein the method further comprises propagating the plant having the enhanced transpirational efficiency.
44. (New) The method of claim 42, wherein the plant is selected from the group consisting of rice, sorghum, wheat and maize.
45. (New) The method of claim 42, wherein the nucleic acid encoding the ERECTA protein is introduced into the plant by introgression.
48. (New) The method of claim 42, wherein the nucleic acid is introduced into the plant by introducing a construct comprising a gene which expresses the ERECTA protein.
49. (New) The method of claim 42, wherein the plant does not comprise a nucleic acid encoding SEQ ID NO: 2 prior to the introduction of the nucleic acid.